



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,672	09/25/2003	Hiromichi Yoshida	TOW-044	9797
959	7590	09/28/2006		
LAHIVE & COCKFIELD 28 STATE STREET BOSTON, MA 02109			EXAMINER YUAN, DAH WEI D	
			ART UNIT	PAPER NUMBER

1745

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,672

Applicant(s)

YOSHIDA ET AL.

Examiner

Dah-Wei D. Yuan

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09252003.09182006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

FUEL CELL

Examiner: Yuan

S.N. 10/672,672

Art Unit: 1745

September 22, 2006

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Suenaga et al. (US 2002/0028370 A1).

Suenaga et al. teach a fuel cell comprising an electrolyte electrode assembly (12), Separators (13,14) for sandwiching the electrolyte electrode assembly, a seal member (S2) provided around the electrode for sealing the reactant gas flow field (14), the reactant gas supply passage (22a,23a) and the reactant gas discharge passage (22b,23b), and a filling seal (S1) that prevents leakage of the reactants at the outer region of the electrode. See Figures 2-4, Paragraphs 74-78.

With respect to claim 2, the filling seal is disposed near the reactant gas supply passage and the reactant gas discharge passage. See Figures 3,4.

With respect to claim 3, Suenage et al. teach the filling seal is disposed near the U-turn region of the electrode. See Figure 3.

With respect to claim 4, Suenage et al. teach seal member is positioned in the seal grooves around the reactant gas flow field, the reactant gas supply passage and the reactant gas discharge. The filling seal is disposed between the seal member and the outer surface of the electrode. See Figures 3,4.

With respect to claims 5,6, the filling seal is disposed between the coolant flow ports (24a,24b) for preventing leakage of the coolant into the electrode. See Figures 3,4.

With respect to claims 7,8, Suenage et al. teach the filling seal is disposed near the U-turn region at the coolant flow field. See Figure 1, Paragraphs 80-82.

4. Claims 1-8 are rejected under 35 U.S.C. 102(a) as being anticipated by Wakahoi et al. (JP 2002-231-272).

Wakahoi et al. teach a fuel cell comprising an electrolyte electrode assembly (12), Separators (14,16) for sandwiching the electrolyte electrode assembly, a liquid seal member (L) provided around the electrode for sealing the reactant gas flow field (14), the reactant gas supply passage (32a,34a) and the reactant gas discharge passage (32b,34b), and a filling seal (L in 28) that prevents leakage of the reactants at the outer region of the electrode. See Figures 1,3, Paragraphs 27-32.

With respect to claim 2, the filling seal is disposed near the reactant gas supply passage and the reactant gas discharge passage. See Figure 1.

With respect to claim 3, Wakahoi et al. teach the filling seal is disposed near the U-turn region of the electrode. See Figure 1.

With respect to claim 4, Wakahoi et al. teach seal member is positioned in the seal grooves around the reactant gas flow field, the reactant gas supply passage and the reactant gas discharge. The filling seal is disposed between the seal member and the outer surface of the electrode. See Figure 1.

With respect to claims 5,6, the filling seal is disposed between the coolant flow ports (36a,36b) for preventing leakage of the coolant into the electrode. See Figure 1.

With respect to claims 7,8, Wakahoi et al. teach the filling seal is disposed near the U-turn region at the coolant flow field. See Figure 1, Paragraphs 30-31.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sugita et al. (2003/0003342 A1) teach the use of seal member on an outer surface of the gas diffusion electrode. Suenaga et al. (US 2002/0051902 A1) teach to integrally form the seal with the membrane electrode assembly.

Art Unit: 1745

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (571) 272-1295. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dah-Wei D. Yuan
September 22, 2006



DAH-WEI YUAN
PRIMARY EXAMINER